Management Plan & Benchmarks

R. Kron

The SDSS-II organization is briefly described in Section VII of the NSF proposal, and in greater detail in the *SDSS-II Management Plan*.

The *Principles of Operation-II* describe institutional and individual interactions with the project. It defines SDSS-II so that institutions and individuals know what they are signing up for.

Some key features of the *SDSS-II Management Plan*:

It is based directly on our experience with SDSS-I

The main addition is a provision for "Project Teams" for Legacy, SEGUE, Supernova, and Calibration.

These teams link operations within their individual spheres to the project as a whole.

The survey integrates the 3 programs and runs as a system.

The system:

drills plates,
obtains raw data,
processes the data,
and makes the data available.

How it all works:

the *Principles of Operation-II* codify the scientific goals

the *Baseline Plan* gives the expectations for the rate of data collection for each of the three surveys
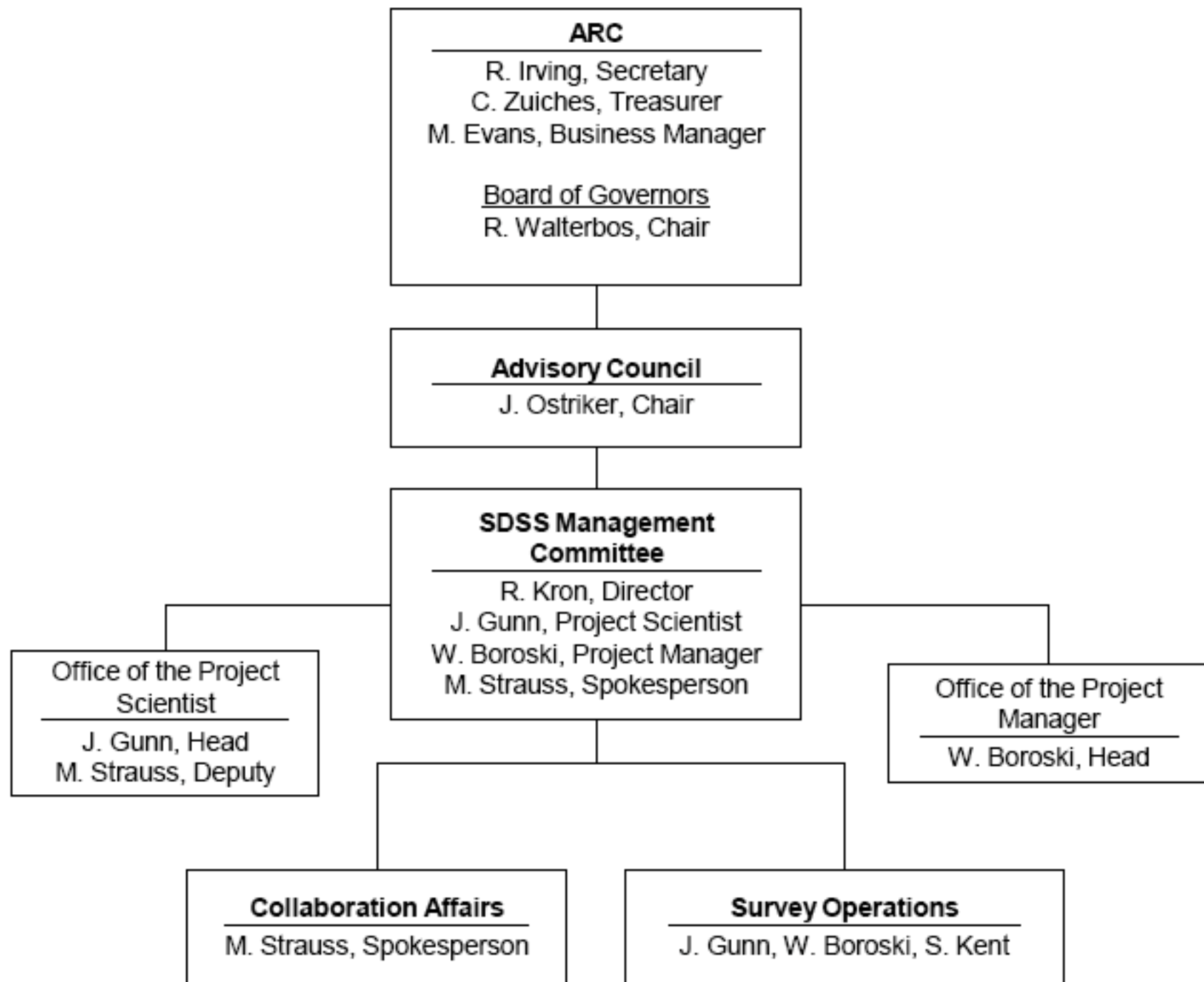
Steve Kent refers to the scheduling formula and creates a Monthly Observing Plan. This Plan informs the Observers of the plates and strips to observe the next dark run.

How it all works (cont.):

The Observers execute the Monthly Observing Plan according to on-site conditions.

The results from the past dark run influence the Monthly Observing Plan for the following dark run, monitored by the relevant Project Teams.

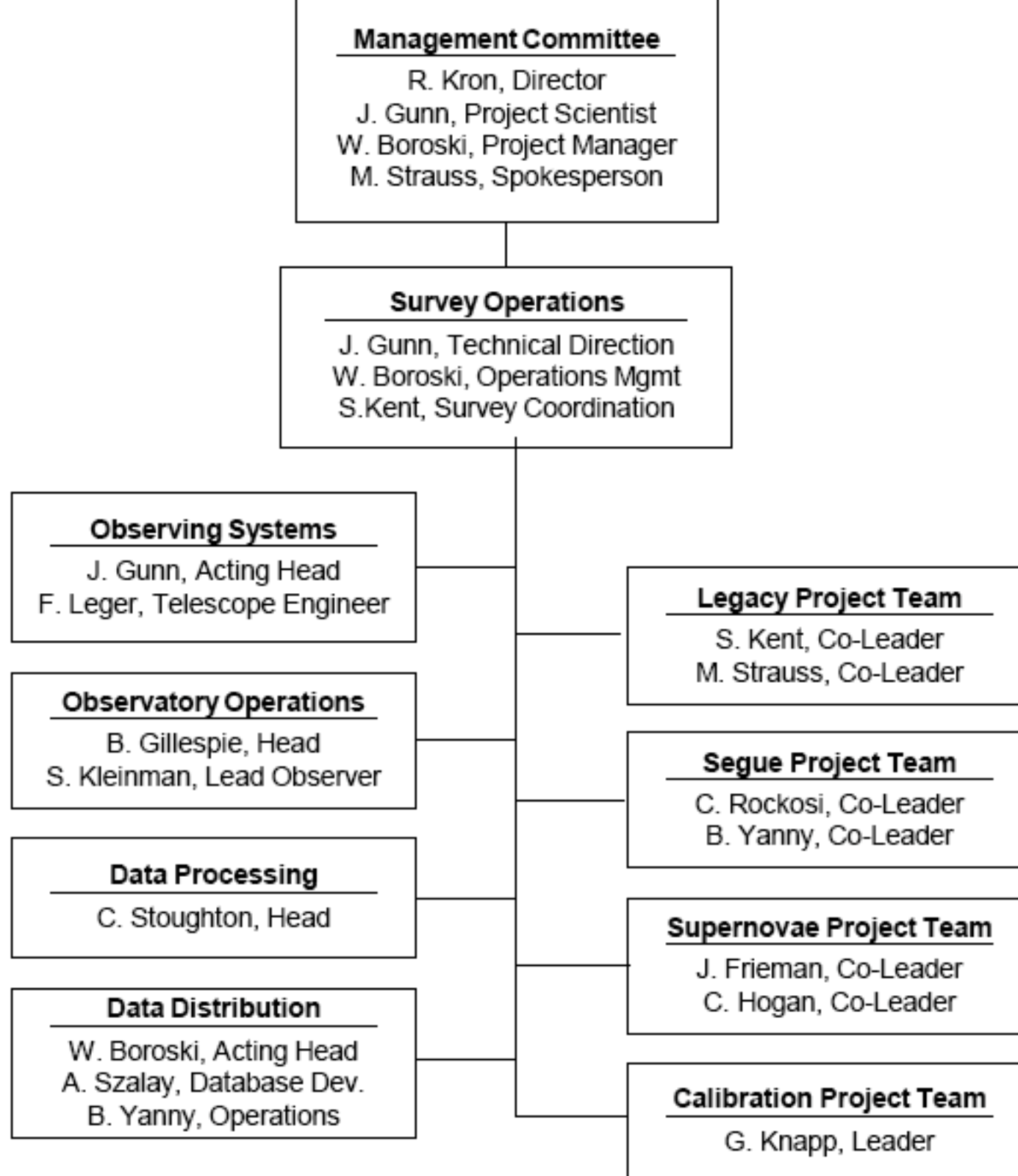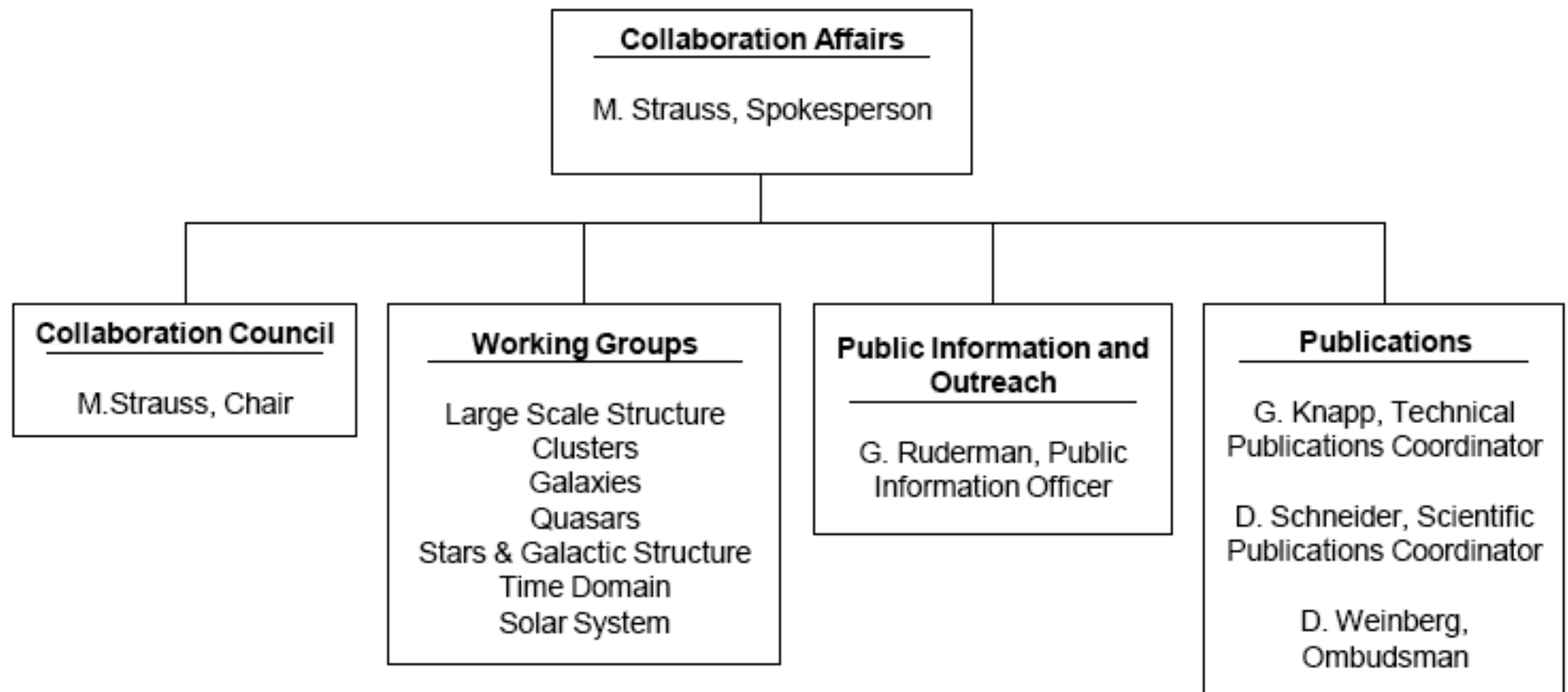We did all of the above in Fall 2004.

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│          R. Irving, Secretary         │
│         C. Zuiches, Treasurer         │
│      M. Evans, Business Manager       │
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│          Board of Governors           │
│         R. Walterbos, Chair           │
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│         SDSS Management              │
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│          R. Kron, Director            │
│       J. Gunn, Project Scientist      │
│      W. Boroski, Project Manager      │
│       M. Strauss, Spokesperson        │
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ARC

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Board of Governors
R. Walterbos, Chair

Advisory Council

J. Ostriker, Chair

SDSS Management Committee

R. Kron, Director
J. Gunn, Project Scientist
W. Boroski, Project Manager
M. Strauss, Spokesperson

Office of the Project Scientist

J. Gunn, Head
M. Strauss, Deputy

Office of the Project Manager

W. Boroski, Head

Collaboration Affairs

M. Strauss, Spokesperson

Survey Operations

J. Gunn, W. Boroski, S. Kent

Management Committee

R. Kron, Director
J. Gunn, Project Scientist
W. Boroski, Project Manager
M. Strauss, Spokesperson

Survey Operations

J. Gunn, Technical Direction
W. Boroski, Operations Mgmt
S.Kent, Survey Coordination

Observing Systems

J. Gunn, Acting Head
F. Leger, Telescope Engineer

Observatory Operations

B. Gillespie, Head
S. Kleinman, Lead Observer

Data Processing

C. Stoughton, Head

Data Distribution

W. Boroski, Acting Head
A. Szalay, Database Dev.
B. Yanny, Operations

Legacy Project Team

S. Kent, Co-Leader
M. Strauss, Co-Leader

Segue Project Team

C. Rockosi, Co-Leader
B. Yanny, Co-Leader

Supernovae Project Team

J. Frieman, Co-Leader
C. Hogan, Co-Leader

Calibration Project Team

G. Knapp, Leader

Figure 3. Organization Chart for Collaboration Affairs

Collaboration Affairs

M. Strauss, Spokesperson

Collaboration Council

M. Strauss, Chair

Working Groups

Large Scale Structure
Clusters
Galaxies
Quasars
Stars & Galactic Structure
Time Domain
Solar System

Public Information and Outreach

G. Ruderman, Public Information Officer

Publications

G. Knapp, Technical Publications Coordinator

D. Schneider, Scientific Publications Coordinator

D. Weinberg, Ombudsman

Risk Management: cost and schedule risk

SDSS-II is a time-bounded project: 1 July 2005 through 30 June 2008 for observations.

We will use this time with high efficiency.

Weather introduces significant uncertainties.

If we have bad luck with the weather or otherwise fall behind, we will not extend the operations.

Baseline Management and Performance Measurement

For SDSS-I, the Management Committee reports annually to the Advisory Council on performance for the past year:

data obtained *cf. SDSS-I Baseline Plan*
data released *cf. SDSS-I Data Release Schedule*
expenses *cf.* budget,

along with the proposed budget for the following year and a revised cost-to-completion. Same for SDSS-II.

Baseline Management and Performance Measurement (cont.)

For SDSS-I, the Management Committee also prepares Quarterly Reports. These include the similar metrics, plus a detailed review of every element of project operations.

The Quarterly Reports include metrics for observatory operations (efficiency) and data flow into and out of the archives.

Same for SDSS-II.

Median Spectroscopic Efficiency (Dark & Gray Time)

2/4/2005

http://tdserver1.fnal.gov/sdss/surveyops.htm
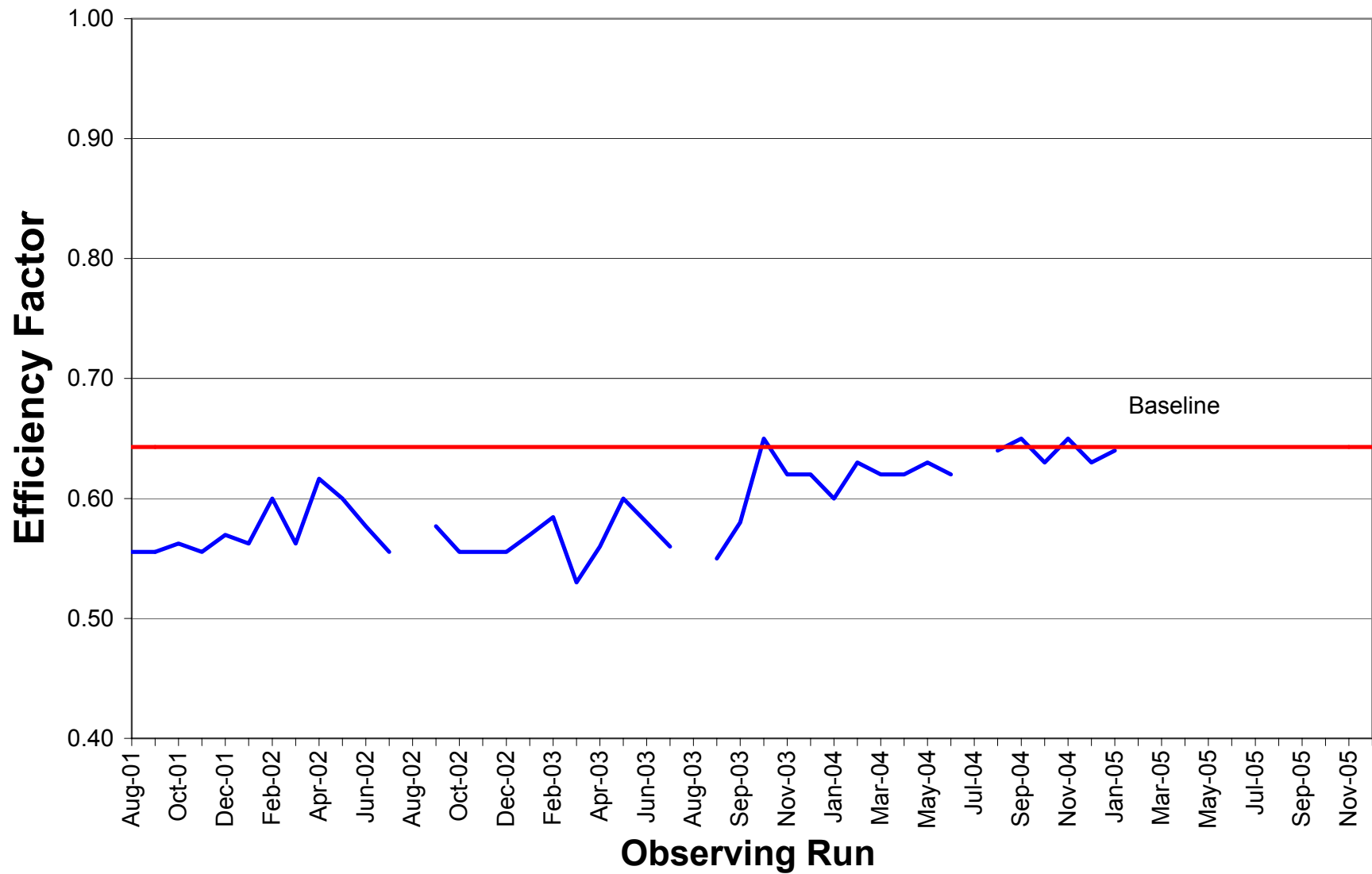
Risk Management: data and the archives

Imaging data are written to two tape drives at the mountain. One set of tapes is shipped to Fermilab for processing.

Data are backed up to Fermilab's Enstore robot.

JHU maintains a duplicate of the CAS.

We have experienced the usual amount of disk failures, corrupted data, etc., but have always managed to recover with no loss.

Risk Management: institutional commitments

plate drilling occurs at the University of Washington. SDSS-II places a similar load on the drilling machine and schedule.

Apache Point Observatory is operated by New Mexico State University for ARC. Operations there will be identical to operations for SDSS-I, except for the addition of the SN processing.

most data processing occurs at Fermilab. The systems there are proven by SDSS-I, and are now routine.

Risk Management: institutional commitments (cont.)

We will ensure that adequate resources are provided to Princeton to undertake the SEGUE spectroscopic processing.

The code running at APO for SN triggers will be from the combined efforts of Chicago, Fermilab, and U. Washington. All are committed to the success of this part of the project.

Data distribution is the responsibility of Fermilab and Johns Hopkins University. These operations will continue as for SDSS-I.

Risk Management: external reviews

We budget for *ad hoc* reviews of elements of the project, as needed. For example:

March 2004 review of
        CAS Development and Deployment

April 2004 review of
        Cost & Schedule for SDSS-I and SDSS-II

Proposed Milestones

We suggest milestones for evaluating our progress on SDSS-II that are similar to those we have used for SDSS-I.

Data Release Schedule (Legacy and SEGUE):

DR6   July 2007
DR7   July 2008
DR8   November 2008

Milestones (cont.)

Data Release Schedule (Supernova):

positions, magnitudes, and other data for good
Type Ia candidates announced within days via
IAU circulars

a public web page will provide similar data for
additional transients on the same time scale

frames obtained in September available about
31 October, and so on

Milestones (cont.)

comparisons of survey progress with respect to the *Baseline Plan* projection, separately for Legacy and SEGUE, and separately for imaging and for spectroscopy.

survey progress for Supernova is reckoned according to the number of nights (and the number of hours on those nights), between 1 September and 30 November, that yield processable data

Details are given in the document *Baseline Plan for SDSS-II Operations*